

**Notice of Allowability**

Application No.

10/754,877

Examiner

Kathleen A. McNelis

Applicant(s)

HAN, KENNETH N.

Art Unit

1742

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to After Final Amendment 12 December 2005.
2. ☒ The allowed claim(s) is/are 2-6, 8-17, 19-33, 35-39 and 41-50.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

**Claims Status**

Claims 1, 7, 18, 34, and 40 were canceled. Claims 2-6, 8-17, 19-33, 35-39, and 41-50 remain for examination wherein claims 2-6, 8, 9, 11-17, 19-25, 27-33, 35-39, 41-42, and 44-50 are amended.

**Status of Previous Rejections**

***Claim Rejections - 35 USC § 112***

The previous rejection of claims 1-50 under 35 USC § 112 is withdrawn in view of applicants' amendment of claims.

***Claim Rejections - 35 USC § 103***

The previous rejection of claims 1-8, 11-24, 27-41 and 44-50 under 35 USC § 103(a) are withdrawn in view of applicants' amendment of claims.

***Double Patenting***

The previous rejection of claims 1-8, 11-24, 27-41 and 44-50 are withdrawn due to applicants' amendment of claims.

**Allowable Subject Matter**

Claims 2-6, 8-17, 19-33, 35-39 and 41-50 are allowed.

**Examiners Amendment**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claim 42, delete "the" from last line as follows: "...c) separating the at least one precious metal from the slurry."

### Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

- Vinals Olia et al. (U.S. 2003/0129112) discloses a process for selective metal leaching of metals from a source material wherein the source material is contacted with an oxidant and a halogen salt in an aqueous solution. Wherein the oxidant is oxygen, ozone and a third reagent;
- Han et al. (U.S. Pat. No. 5,308,381) discloses a method for extraction of gold and silver by leaching in a solution containing ammonia, ammonium salts and one or more oxidants;
- Young et al. (U.S. Pat. No. 6,471,743) discloses a method for leaching ores to recover gold, wherein an alkali metal halide is used as leach solution and heating is within a range of 80 to 120 °C;
- Han et al. (U.S. Pat. No. 5,308,381) discloses a method for ammonia extraction of gold using ammonium iodide salt;
- Han et al. (U.S. Pat. No. 5,114,687) discloses a method for extraction of gold and silver with ammonia, ammonium salts and one or more oxidants, where oxidants are a combination of oxygen and cupric ions;
- Han et al. (U.S. Pat. No. 5,328,669) discloses a method for extraction of precious metals using halogen salts with elemental iodine as oxidizer; and
- Han et al. (U.S. Pat. NO. 5,542,957) discloses a method for recovery of PGM using halogen reagents by leaching in a solution containing an ammonium halogen salt in the presence of oxygen and sulfuric acid;

However, these citations do not disclose or suggest

- a method to recover a precious metal from a source material comprising the steps of contacting the source material comprising at least one precious metal with a solution comprising an ammonium salt, a halogen salt and an oxidant wherein the oxidant is gaseous and is provided to the solution by the introduction of at least a first liquid and a

second liquid reagent and recovering at least one precious metal from the solution as in instant claim 9, or

- a method to separate a precious metal from a source material comprising the steps of contacting the source material comprising at least one precious metal with a solution comprising an ammonium salt, a halogen salt and an oxidant wherein the oxidant is gaseous and is provided to the solution by the introduction of at least a first liquid and a second liquid reagent and separating at least one precious metal from the solution as in instant claim 25, or
- a method to extract a precious metal from a source material comprising the steps of charging to a reaction zone a solution comprising at least one ammonium salt, at least one halogen salt at least one acid, water and a source material containing at least one precious metal, heating the reaction zone to a temperature of approximately 50 to 100 °C under oxidizing conditions to form a slurry wherein the oxidizing conditions are provided by a gaseous oxidant that is provided to the solution by introduction of at least a first liquid reagent and at least a second liquid reagent and separating at least one precious metal from the slurry as in instant claim 42.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen A. McNelis whose telephone number is 571- 272-3554. The examiner can normally be reached on M-F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ROY KING   
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700